

2.1.16 Operating Characteristics of Electric Appliances in the Residential Sector

| | Power Draw (W) (1) | | | Annual Usage (hours/year) | | | Annual Consumption (kWh/year) | Annual Cost (\$) (2) | |
|------------------------------|--------------------|------|-----------|------------------------------|-------|-------|----------------------------------|--------------------------|-----|
| | Active | Idle | Off | Active | Idle | Off | | | |
| Kitchen | | | | | | | | | |
| Coffee Maker | 1,000 | 70 | 0 | | 38 | 229 | 8,493 | 58 | 5 |
| Dishwasher (3) | 0 | 0 | | (4) | 365 | 0 | | 120 | 11 |
| Microwave Oven | 1,500 | 0 | 3 | | 70 | 0 | 8,690 | 131 | 12 |
| Refrigerator-Freezer | | | | | | | | 660 | 62 |
| Freezer | | | | | | | | 470 | 44 |
| Lighting | | | | | | | | | |
| 18-W Compact Fluorescent | 18 | 0 | 0 | | 1,189 | 0 | 0 | 20 | 2 |
| 60-W Incandescent Lamp | 60 | 0 | 0 | | 672 | 0 | 0 | 40 | 4 |
| 100-W Incandescent Lamp | 100 | 0 | 0 | | 672 | 0 | 0 | 70 | 7 |
| Torchiere Lamp-Halogen | 300 | 0 | 0 | | 1,460 | 0 | 0 | 440 | 41 |
| Bedroom and Bathroom | | | | | | | | | |
| Hair Dryer | 710 | 0 | 0 | | 50 | 0 | 0 | 40 | 4 |
| Waterbed Heater | 350 | 0 | 0 | | 3,051 | 0 | 0 | 1,070 | 101 |
| Laundry Room | | | | | | | | | |
| Clothes Dryer | | | | (4) | 359 | | | 1,000 | 94 |
| Clothes Washer (3) | 0 | 0 | 0 | (4) | 392 | 0 | 0 | (3) 110 | 10 |
| Home Electronics | | | | | | | | | |
| CPU & Monitor | 182/30 | 0 | 1,337/632 | | | 0 | | 260 | 24 |
| Stereo Systems | 33 | 30 | 3 | | 1,510 | 1,810 | 5,440 | 119 | 11 |
| Television | 113 | | 4 | | 1,460 | | 7,300 | 193 | 18 |
| Analog, <40" | 86 | | | (5) | 1,095 | | | 184 | 17 |
| Analog, >40" | 156 | | | (5) | 1,825 | | | 312 | 29 |
| Digital, ED/HD TV, <40" | 150 | | | (5) | 1,095 | | | 301 | 28 |
| Digital, ED/HD TV, >40" | 234 | | | (5) | 1,825 | | | 455 | 43 |
| Set-top box | 20 | 0 | 20 | | 6,450 | 0 | 2,310 | 178 | 17 |
| DVD/VCR | 17 | 13 | 3 | | 170 | 5,150 | 3,430 | 78 | 7 |
| Heating and Cooling | | | | | | | | | |
| Dehumidifier | 600 | 0 | | | 1,620 | 0 | | 970 | 91 |
| Furnace Fan | 295 | 0 | | | 1,350 | 0 | | 400 | 38 |
| Ceiling Fan (only fan motor) | 35 | | | | 2,310 | | | 81 | 8 |
| Water Heating | | | | | | | | | |
| Water Heater-Family of 4 | 4,500 | | | (6) | 64 | N.A. | 0 | 4,770 | 448 |
| Water Heater-Family of 2 | 4,500 | | | (6) | 32 | N.A. | 0 | 2,340 | 220 |
| Portable Spa | 4,350 | 275 | 0 | | 25 | 8,735 | 0 | 2,525 | 237 |
| Miscellaneous | | | | | | | | | |
| Pool Pump | 1,000 | 0 | | | 792 | 0 | | 790 | 74 |
| Well Pump | 725 | 0 | | | 115 | 0 | | 80 | 8 |
| Total Standby | 0 | 57 | | | 0 | 8,760 | | 500 | 47 |

Note(s): 1) Power draw will vary due to appliance components and modes of operation. 2) \$0.096/kWh. 3) Excludes electricity for water heating and drying. 4) Cycles/year. 5) TVs <40" are estimated on 3 hours/day and TVs >40" are estimated on 5 hours/day. 6) Gallons/day.

Source(s): BTS/A.D. Little, Electricity Consumption by Small End Uses in Residential Buildings, Aug. 1998, Exhibit 6-8, p. 6-10 for clothes washer, computer, dehumidifier, dishwasher, furnace fan, pool pump, torchiere lamp-halogen, waterbed heater, and well pump; LBNL, Energy Data Sourcebook for the U.S. Residential Sector, LBNL-40297, Sept. 1997, p. 100-102 for clothes dryers, Table 10.2, p. 108 for lighting, and p. 62-67 for water heaters; LBNL, Miscellaneous Electricity Use in the U.S. Residential Sector, LBNL-40295, Apr. 1998, Appendix D for hair dryers; EIA, Supplement to AEO 2008, June 2008, Table 21 for refrigerator and freezer; GAMA, Consumers' Directory of Certified Efficiency Ratings for Heating and Water Heating Equipment, Apr. 2000 for water heater power draw; EIA/TIAX, Commercial and Residential Sector Miscellaneous Electricity Consumption: FY2005 and Projections to 2030, Sept. 2006, p. 41-60 for coffee maker, microwave oven, stereo systems, TVs, set-top box, DVD/VCR, ceiling fan, and portable spa; and LBNL for total standby.